

AMENDMENTS

1. (Previously Presented) An initiator explosive device for detonating a second explosive comprising:

porous nanocrystalline silicon ~~having a plurality of pores disposed therein; and~~
a solid state oxidant disposed within ~~said pores~~ pores of said porous nanocrystalline silicon.

2. (Previously Presented) The explosive device of claim 1 wherein said solid-state oxidant comprises a nitrate salt.

3. (Previously Presented) The explosive device of claim 2 wherein said nitrate salt is selected from the group consisting of sodium nitrate, potassium nitrate, ammonium nitrate, magnesium nitrate, calcium nitrate, and gadolinium nitrate.

Claims 4 through 7: (Withdrawn)

8. (Previously Presented) The explosive device of claim 1 wherein said solid state oxidant comprises a solid state oxidant selected from the group consisting of PETN, a metal azide, and TNT.

9. (Previously Presented) The explosive device of claim 1 wherein said solid-state oxidant is baked into the pores of said porous nanocrystalline silicon.

10. (Withdrawn)

11. (Currently Amended) The explosive device of claim 1 wherein said porous nanocrystalline silicon comprises a thin film.

12. (Withdrawn)

13. (Canceled)

14. (Currently Amended) A method for detecting a target analyte comprising:

providing an initiator explosive device of nanocrystalline silicon having a plurality of pores disposed therein; and a solid state oxidant disposed within said pores;

~~according to claim 1;~~

igniting the porous nanocrystalline silicon containing the target analyte and the oxidant; and

measuring an emission spectrum for the presence of the target analyte.

15. (Currently Amended) The method of claim 14 further comprising providing a porous nanocrystalline silicon substrate in the form of a thin film.

16. (Canceled)

17. (Original) The method of claim 14 further comprising selecting the oxidant to be gadolinium nitrate.

18. (Currently Amended) The method of claim 14 further comprising baking the oxidant with the nanocrystalline silicon ~~substrate~~ so that the oxidant is baked into pores of the porous nanocrystalline silicon ~~substrate~~.

19. (Original) The method of claim 14 further comprising absorbing from between approximately 1 and 10 micro liters.

20. (Original) The method of claim 14 further comprising igniting by resistively heating a silicon filament.

21. (Original) The method of claim 14 further comprising photographing the emission spectra.

22. (Original) The method of claim 21 further comprising subjecting the photograph to spectrometry analysis.

23. (Currently Amended) The method of claim 14 further comprising absorbing a predetermined amount of a solution containing the target analyte on the porous nanocrystalline silicon.

24. (Currently Amended) The method of claim 14 further comprising absorbing a predetermined amount of ambient gas containing the target analyte on the porous nanocrystalline silicon.

25. (Currently Amended) The method of claim 14 further comprising absorbing a predetermined amount of ambient liquid containing the target analyte on the porous nanocrystalline silicon.

26. (Currently Amended) The method of claim 14 further comprising absorbing a predetermined amount of ambient particulate matter containing the target analyte on the porous nanocrystalline silicon.

27. Withdrawn

28. Withdrawn

29. (New) The explosive device of claim 1 wherein said porous nanocrystalline silicon comprises one of a film or thin film of porous silicon electrochemically etched into a single crystal or polycrystalline silicon substrate and a powder of porous crystalline silicon particles.